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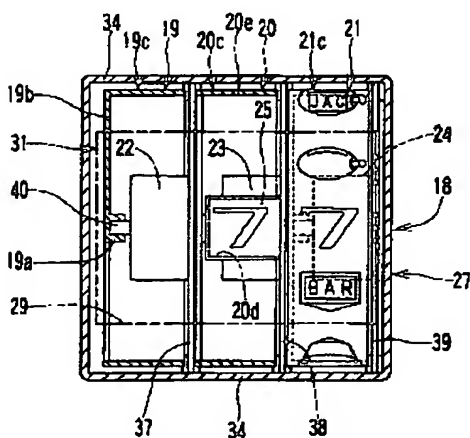
Summary

(57) [Abstract]

[Technical problem] On the basis of mechanical composition, while, the uniform change display of a pattern can be prevented and the game machine whose production nature of a change display of a pattern improves is offered.

[Means for Solution] It is arranged the time fuselages 19-21 with which two or more kinds of 1st pattern required for a game was expressed, the driving means 22-24 which drive these time fuselages 19-21, and inside the time fuselages 19-21, and has the display means 25 which can change display the 2nd pattern.

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CLAIMS

[Claim(s)]

[Claim 1] The game machine characterized by providing the following. Two or more kinds 1st pattern (43) fuselage [with which - (45) was expressed / time] (19) - required for a game (21) This time fuselage (19) driving-means [which drive - (21)] (22) - (24) The aforementioned time fuselage (19) Display means which can change display the 2nd pattern (46) being arranged inside - (21) (25)

[Claim 2] The 1st pattern (43) of the above Game machine according to claim 1 characterized by having a profits state generating means (55) to make a game person generate a profits state with the combination of - (45) and/or the 2nd pattern (46).

[Claim 3] The game machine according to claim 1 or 2 characterized by having the 2nd pattern control means (64) which fluctuate the 2nd pattern (46) of the above, and a predetermined pattern is alternatively chosen [control means] from two or more kinds of 2nd patterns (46) of the above, and indicate by halt.

[Claim 4] A part of 2nd pattern [at least] (46) of the above is a game machine given in any of the claims 1-3 characterized by being value equivalent to 1st pattern [of the above] (43) - (45) they are.

[Claim 5] The aforementioned time fuselage (20) is the check-by-looking section (20d) which can check the aforementioned display means (25) side by looking. It has and is the aforementioned check-by-looking section (20d) after rotation. So that it may stop corresponding to the aforementioned display means (25) A game machine given in any of the claims 1-4 characterized by having the 1st pattern control means (63) which rotate the aforementioned time fuselage (20) and fluctuate the 1st pattern (44) they are.

[Claim 6] The aforementioned time fuselage (20) and (21) equip a hoop direction with the check-by-looking section (20d) (21d) and the covered section (20e) which cannot be checked by looking (21e) which can check the aforementioned display means (25) side by looking. So that the aforementioned check-by-looking section (20d) (21d) and the aforementioned covered section (20e) (21e) may stop alternatively after rotation corresponding to the aforementioned display means (25)

A game machine given in any of the claims 1-4 characterized by having the 1st pattern control means (63) which rotate the aforementioned time fuselage (20) and (21), and fluctuate the 1st pattern (44) and (45) they are.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention relates to game machines, such as a pachinko machine, an arrangement ball machine, a mahjong ball game machine, and a ***** type game machine.

[0002]

[Description of the Prior Art] There is a thing equipped with the change pattern display which can change display two or more game patterns in pinball machines, such as a pachinko machine, and a slot machine. The change pattern display used for this kind of game machine has the common thing of mechanical composition of having made the rotating drum as which two or more kinds of patterns were displayed on the periphery side by the hoop direction correspond to a pattern viewing area, and having arranged more than one to the longitudinal direction conventionally.

[0003] When there is a change demand from a change demand means by detection of a game sphere, or operation of a game person, this Automatically [when each rotating drum rotates, the pattern is indicated by change at a pattern viewing area and predetermined-time progress is carried out from a change start] by or halt operation of a game person When each rotating drum stops in predetermined sequence and the pattern corresponding to the pattern viewing area of each of that rotating drum becomes a specific mode (specification should put together), game media, such as predetermined coin, are paid out to a game person, or a profits state advantageous to a game person is generated.

[0004]

[Problem(s) to be Solved by the Invention] In order that the conventional change pattern display may display two or more kinds of patterns on the periphery of a rotating drum fixed and may only fluctuate the pattern corresponding to a pattern viewing area by rotation of a rotating drum, on the other hand, the hand of cut of a rotating drum tends to become a uniform change display by Mukai, its stage effects by the change display of a pattern are low, and it has the fault in which the interest over a game person's game is reduced.

[0005] In view of such a conventional trouble, on the basis of mechanical composition, this invention can prevent the uniform change display of a pattern, while, and it aims at offering the game machine whose production nature of a change display of a pattern improves.

[0006]

[Means for Solving the Problem] this invention is arranged the time fuselages 19-21 with which two or more kinds of 1st pattern 43-45 required for a game was expressed, the driving means 22-24 which drive these time fuselages 19-21, and inside the aforementioned time fuselages 19-21, and is equipped with the display means 25 which can change display the 2nd pattern 46.

[0007]

[Embodiments of the Invention] Hereafter, the operation form of this invention is explained in full detail based on a drawing. Drawing 1 - drawing 7 illustrate the 1st operation form of this invention. It sets to drawing 1 and is 1. Front frame 2 which is a main part of a game machine and was pivoted free [opening and closing] It has. front frame 2 **** -- the game board 3 it equips free [attachment and detachment] from a background -- having -- this game board 3 an anterior -- glass door 4 Front board 5 It is arranged free [opening and closing]. front board 5 **** - - upper pan 6 which stores the game sphere for discharge It is equipped. Front frame 2 Lower pan 7 which stores a surplus sphere in the lower part Discharge means 8 Discharge handle 9 It is prepared, respectively.

[0008] the game board 3 **** -- while being annularly equipped with a guide rail 10 -- the game field 11 inside the guide rail 10 -- the 1st change pattern display means 12, the 2nd change pattern display means 13, the 1st change demand means 14, the 2nd change demand means 15, and the adjustable winning-a-prize means 16 -- the game parts of winning-a-prize means 17 grade are usually arranged

[0009] The 1st change pattern display means 12 is constituted, as it is for fluctuating the 1st below-mentioned pattern and the 2nd pattern by random number control, and indicating by halt after change of a predetermined time and is shown in drawing 2 - drawing 5 by change demand when the 1st change demand means 14 detects a game sphere. Namely, this 1st change pattern display means 12 is equipped with the rotating drums [two or more (for example, three pieces)] 19-21 arranged at the longitudinal direction, the drive motors (driving means) 22-24 which drive separately each of these rotating drums 19-21, and the liquid crystal display

means 25 arranged in one piece or two or more rotating drums 21 in the display case 18, and a change display of two or more patterns is possible for it to a longitudinal direction.

[0010] the display case 18 — the game board 3 the front trim case 26 with which the front-face side was equipped free [attachment and detachment], and the shape of a rectangle and the other receipt cases 27 with which the background of the front trim case 26 was equipped free [attachment and detachment] — having — the receipt case 27 — the game board 3 installation — it fitted into the hole 28 and has projected back It has the hood 30 which the front trim case 26 is formed in this pattern display window [which was prepared in the transverse-plane side in the shape of opening] 29, and pattern display window 29 bottom, and projects ahead, and the 2nd change pattern display means 13 is established in the center of abbreviation of the longitudinal direction of the hood 30.

[0011] The pattern display window 29 is a size which has the right-and-left width of face which can display the 1st pattern of rotating drums 19-21, and the vertical width of face which can display the 1st pattern of three coma in one coma or two or more coma, for example, the vertical direction, when rotating drums 19-21 are idle states, and is constituted by the shape of a rectangle, and other proper configurations, and the interior of this pattern display window 29 serves as the pattern viewing area 31. The pattern display window 29 is blockaded by the covering 32 arranged at the anterior of rotating drums 19-21.

[0012] Covering 32 incurvates a rotating-drum 19-21 side circularly along with the periphery of rotating drums 19-21 by synthetic-resin material possible a check by looking and transparent etc. from before, and is constituted, and the display case 18 is equipped with it free [attachment and detachment]. Covering 32 equips vertical ends with the engagement presser foot stitch tongue 33, and is engaging with the engagement section 35 by which the engagement presser foot stitch tongue 33 was formed in the wall 34 of the vertical both sides of the receipt case 27 free [engaging and releasing]. In addition, three winning-a-prize lines 36 of a longitudinal direction and the two directions of slant are shown into the portion corresponding to the pattern viewing area 31 by covering 32. However, this winning-a-prize line 36 is not necessarily required.

[0013] Rotating drums 19-21 make a longitudinal direction approach at intervals of predetermined in the receipt case 27, are arranged, and are supported free [rotation] by the support plates 37-39 fixed free [attachment and detachment] in the receipt case 27 at the circumference of the horizontal-axis heart. Support plates 37-39 are in the right-and-left unilateral of each rotating drums 19-21, and the side corresponding to the rotating drums 19-21 of each of those support plates 37-39 is equipped with drive motors 22-24.

[0014] each drive motors 22-24 — support plates 37-39 and an opposite side — driving shafts 40-42 — having — these driving shafts 40-42 — the hub by the side of a rotating drum 19-21 — section 19a - 21a It is fixed free [attachment and

detachment]. a hub — section 19a — 21a Fork section 19b — 21b prepared in rotating drums 19-21 by support plates 37-39 and the opposite side It is fixed. Therefore, each rotating drums 19-21 are supported by the driving shafts 40-42 of drive motors 22-24 free [rotation]. in addition, the rotating drums 19-21 — a hub — section 19a — 21a And fork section 19b — 21b except — you may make it support by driving shafts 40-42 by drive motors 22-24 and the opposite side through supporter material suitably

[0015] Drum section 19c of rotating drums 19-21 — 21c The whole is constituted by the synthetic-resin material which cannot check the interior by looking. In the central rotating drum 20, it is drum section 20c. It is 20d of check-by-looking sections possible [correspondence for the liquid crystal display means 25] to a part. It is prepared. Therefore, drum section 20c of the rotating drum 20 of this center 20d of check-by-looking sections which can check the internal liquid crystal display means 25 side by looking, and covered section 20e which cannot be checked by looking It prepares for the hoop direction. 20d of in addition, check-by-looking sections Drum section 20c of a rotating drum 20 Although constituted by the formed notching section or opening, the convex lens the transparent board which can check the liquid crystal display means 25 side by looking, and for expansion etc. may also close.

[0016] Drum section 19c of each rotating drums 19-21 — 21c As shown in drawing 7 (A), two or more kinds of 1st pattern 43-45 required for a game sets abbreviation regular intervals to a hoop direction, and is prepared in the peripheral face at it. The 1st pattern 43-45 has an interval corresponding to the pattern viewing area 31 in three pieces which adjoins the hoop direction two or more, when rotating drums 19-21 stop. The 1st pattern 44 by the side of a rotating drum 20 is 20d of the check-by-looking section. It is arranged at abbreviation regular intervals at criteria.

[0017] In addition, the pattern is used suitably and two or more the 1st pattern 43-45 is shown for the 1st pattern 43-45 by the peripheral face of rotating drums 19-21 at the hoop direction by making into the 1st pattern group the thing of a bell, BAR and JAK7, a plum, a cherry, and others which combined suitably the of-the-same-kind pattern and the different-species pattern.

[0018] The liquid crystal display means 25 makes the abbreviation center section of the pattern viewing area 31, for example, the vertical direction, correspond, and is positively arranged near the inner circumference of a rotating drum 20, and the support plate 38 is equipped with it free [attachment and detachment]. After the liquid crystal display means 25 indicates two or more kinds of 2nd pattern 46 possible [two or more kinds of 2nd pattern 46 required for a game / change] and displayed on the display screen of the anterior one by one in predetermined sequence by change by the same or change pattern predetermined to a different direction as the hand of cut of rotating drums 19-21, the 2nd pattern 46 chooses one piece alternatively, and it is made it to indicate by halt. In addition, the liquid crystal display means 25 has a size which can display the 2nd one pattern 46 by the

idle state.

[0019] Two or more kinds of 2nd pattern 46 displayed on the liquid crystal display means 25 As at least a part is as of the same kind as the 1st pattern 43-45 by the side of a rotating drum 19-21 and it is shown in drawing 7 (B) Like the 1st pattern 43-45, the pattern is used suitably and the thing of a bell, BAR and JAK7, a plum, a cherry, and others which combined suitably the of-the-same-kind pattern and the different-species pattern is made into the 2nd pattern group.

[0020] moreover, other rotating drums 19 and 21 to which the 2nd pattern 46 by which it is indicated by halt stops the 2nd pattern 46 for the liquid crystal display means 25 corresponding to the winning-a-prize line 36 top The 1st near pattern 43 and 45 making into a specific mode the case where it becomes an of-the-same-kind pattern etc. — at least — a part (the all or in part) — it has value equivalent to the 1st pattern 43-45 of each rotating drums 19-21

[0021] By change demand when a change display of one pattern is possible and the 2nd change demand means 15 detects a game sphere one or more, the 2nd change pattern display means 13 fluctuates the pattern by random number control, and is stopped after change of a predetermined time. In addition, ten kinds of number patterns to 0-9 are used for the pattern of the 2nd change pattern display means 13.

[0022] It has the opening-and-closing presser foot stitch tongue 47 of the right-and-left couple which conversion in the 1st disadvantageous state (closed state) for a game person and the 2nd advantageous state (open state) can be possible for the 1st change demand means 14, and can be opened and closed freely, and the electric tulip etc. is used. In addition, when the pattern after change of the 2nd change pattern display means 13 is the predetermined mode defined beforehand, the opening-and-closing presser foot stitch tongue 47 carries out predetermined-time opening of the 1st change demand means 14. The 2nd change demand means 15 is constituted by the passage gate etc.

[0023] Conversion in the 1st disadvantageous state (closed state) for a game person and the 2nd advantageous state (open state) is possible for the adjustable winning-a-prize means 16. The halt pattern corresponding to [have the opening-and-closing board 48 supported pivotably free / opening and closing / by the horizontal axis by the side of the lower part, and] each winning-a-prize line 36 to after change of the 1st change pattern display means 12 is a specific mode (for example, as shown in "7, 7, and 7"). When the specific pattern defined beforehand or a specific pattern becomes should put together, the opening-and-closing board 48 opens wide to an anterior, and shifts to a game state advantageous to a game person.

[0024] The specific field 49 is established in the interior at the adjustable winning-a-prize means 16, and a game state is made to continue specially when a game sphere passes through this specific field 49. In addition, the adjustable winning-a-prize means 16 repeats switching action to the number of times of maximum predetermined (for example, 16 times), when a predetermined time (for example, for 30 seconds) passes after opening, or on condition that the opening-and-closing

board 48 is closed on condition that any when the game sphere of a predetermined number (for example, ten pieces) wins a prize, or formation of the earlier one, and a game sphere passes through the specific field 49.

[0025] Drawing 6 is a block diagram which illustrates a control system. In drawing 6, 50 is a game control board, and it is the game board 3. Main parts 1 of a game machine, such as a rear cover of a background The predetermined part of a background is equipped free [attachment and detachment]. 51 is a display-control substrate and the background of the 1st change pattern display means 12 etc. is the main part 1 of a game machine. The predetermined part of a background is equipped free [attachment and detachment]. In addition, the game control board 50 and the display-control substrate 51 are constituted by the separate substrate, and are contained by the same or separate substrate case.

[0026] In the game control board 50, it is mainly the game board 3. It is equipped with the game control means 52 which control near game operation. The game control means 52 are equipped with the 1st game lottery means 53, the 1st game judging means 54, the 1st profits state generating means 55, the 2nd game lottery means 56, the 2nd game judging means 57, the 2nd profits state generating means 58, and instruction information transmitting means 59 grade, and are constituted by CPU, ROM, RAM, etc.

[0027] The display-control substrate 51 is equipped with a 1st change display-control means 60 to mainly perform the display control by the side of the 1st change pattern display means 12, and a 2nd change display-control means 61 to perform the display control by the side of the 2nd change pattern display means 13. The 1st change display-control means 60 is equipped with the instruction information analysis means 62, the 1st pattern control means 63, and 2nd pattern control-means 64 grade, and is constituted by CPU, ROM, RAM, etc.

[0028] It is for the 2nd game lottery means 56 generating the random number for the 2nd game determination of a predetermined number one by one, such as generating the random number value of ten pieces to 0-9, when the probability of occurrence of for example, a predetermined mode is 1/10, and casting lots in which random number value of the random number for the 2nd game determination, on condition that a change demand of the 2nd change demand means 15. The 2nd game judging means 57 is for judging whether the 2nd game state is generated based on the lottery random number value of the 2nd game lottery means 56, and when the lottery random number value in the 2nd game lottery means 56 is the 2nd game decision value, it is judged to be the 2nd game.

[0029] The 2nd game judging means 57 judges the 2nd profits state generating means 58 to be the 2nd game, on condition that the pattern after change of the 2nd change pattern display means 13 is decided in a predetermined mode, it generates the 2nd profits state, and it is for making it open wide a pred terminated tim (for example, 0.5-second about room) about the opening-and-closing presser foot stitch tongue 47 of the 1st change demand means 14.

[0030] It is for the 1st game lottery means 53 generating the random number for the 1st game determination of a predetermined number one by one, such as generating the random number value of 350 pieces to 0-349, when the probability of occurrence of for example, a specific mode is 1/350, and casting lots in which random number value of the random number for the 1st game determination, on condition that a change demand of the 1st change demand means 14.

[0031] The 1st game judging means 54 is for judging whether the 1st game state is generated based on the lottery random number value of the 1st game lottery means 53, and when the lottery random number value in the 1st game lottery means 53 is the 1st game decision value (for example, random number value "7"), it is judged to be the 1st game.

[0032] The 1st profits state generating means 55 has the 1st game judging with the 1st game judging means 54. It is for generating the 1st profits state advantageous to a game person, after the halt pattern of the 1st pattern 43-45 on the winning-a-prize line 36 of the 1st change pattern display means 12 and the 2nd pattern 46 serves as a specific mode. For example, when the opening-and-closing board 48 of the adjustable winning-a-prize means 16 was opened wide and a predetermined time (for example, for 30 seconds) passes after the opening, Or the opening-and-closing board 48 is closed by any when the game sphere of a predetermined number (for example, ten pieces) wins a prize, or formation of the earlier one, and switching action is made to continue to the number of times of maximum predetermined (for example, 16 times), on condition that a game sphere passes through the specific field 49.

[0033] Whenever the instruction information transmitting means 59 has a judgment result from the 1st game judging means 54 based on a change demand of the 1st change demand means 14, the judgment result of the 1st game or the 1st non-game, The predetermined instruction information about the change time of the 1st pattern 43-45 by the side of the 1st change pattern display means 12 at that time and 2nd pattern 46 grade is transmitted to the 1st change display-control means 60 of the display-control substrate 51 by 1 direction communication. In addition, the turnover time of each rotating drums 19-21 and the change display time of the liquid crystal display means 25 are sufficient as change time, and the time from the change start by the side of the 1st change pattern display means 12 to a halt is sufficient as it.

[0034] While the 2nd change display-control means 61 carries out predetermined-time change of the pattern of the 2nd change pattern display means 13 based on the judgment result of the 2nd game judging means 57 Change control of the 2nd change pattern display means 13 is carried out that the pattern should be stopped according to a judgment result so that may stop in a predetermined mode after changing in the 2nd game judging, and it may stop in a non-predetermined mode, respectively, after changing in the 2nd non-game judging.

[0035] The 1st pattern control means 63 are for controlling change of the 1st pattern 43-35 by rotation of each rotating drums 19-21, and halt, and a halt.

According to the judgment result of the 1st game judging analyzed with the instruction information analysis means 62, and the 1st non-game judging, and the instruction information on change time, predetermined-time rotation of the rotating drums 19-21 is carried out with drive motors 22-24. Each rotating drums 19-21 are stopped in predetermined sequence like the left, the right, and the middle class.

[0036] When the judgment result of the 1st game judging means 54 is the 1st game judging, the 1st pattern control means 63 again Rotating drums 19 and 21 The 1st pattern 43 and 45 on the winning-a-prize line 36 It becomes an of-the-same-kind pattern. 20d of check-by-looking sections of a rotating drum 20 Each rotating drums 19-21 are stopped so that it may correspond to the liquid crystal display means 25 on the winning-a-prize line 36. In the 1st non-game judging, it is the 1st pattern 43 and 45 on the winning-a-prize line 36 of rotating drums 19 and 21. It becomes an of-the-same-kind pattern or a different-species pattern. 20d of check-by-looking sections of a rotating drum 20 Each rotating drums 19-21 are stopped so that it may correspond to the liquid crystal display means 25 on the winning-a-prize line 36.

[0037] The 2nd pattern control means 64 are for indicating two or more kinds of 2nd pattern 46 by change by the predetermined change pattern after a halt of a rotating drum 20 at least, and making it stop. When the judgment result of the 1st game judging means 54 is the 1st game judging, they are rotating drums 19 and 21. The 1st pattern 43 and 45 on the winning-a-prize line 36 In an of-the-same-kind pattern In the 1st non-game judging, they are rotating drums 19 and 21. The 1st pattern 43 and 45 on the winning-a-prize line 36 The 2nd pattern 46 is stopped in a part, an of-the-same-kind pattern, or a different-species pattern.

[0038] In addition, the 2nd pattern control means 64 may be made to indicate the 2nd pattern 46 of the liquid crystal display means 25 also during rotation of rotating drums 19-21, such as indicating the 2nd pattern 46 by change synchronizing with the change display of the 1st pattern 43-45, by change, when the rotational speed of rotating drums 19-21 falls the 1st pattern 43-45 to an identifiable speed by viewing.

[0039] A game is faced in the above-mentioned pinball machine, and it is the discharge means 8. Discharge handle 9 It is operated and is the discharge means 8. A guide rail 10 is met in a game sphere, and it is the game board 3 one by one. It is made to discharge to a side and goes. Then, the game board 3 The game sphere discharged at the upper part side is the game board 3. It falls below, usually winning a prize of winning-a-prize means 17 grade, or passing the 2nd change demand means 15, while falling along the face of a board, after going into the game field 11.

[0040] If the 2nd change demand means 15 detects a game sphere, it will judge whether by the change demand, the 2nd game lottery means 56 casts lots in the generating random number value at the time, and the 2nd game judging means 57 changes into the 2nd game state from the lottery random number value, and the 2nd change display-control means 61 will fluctuate the pattern of the 2nd change pattern display means 13 by the judgment result.

[0041] And when the judgment result of the 2nd game judging means 57 is the 2nd

game judging, the halt pattern after change of the 2nd change pattern display means 13 becomes predetermined modes, such as "7", the 2nd profits state by the 2nd profits state generating means 58 occurs, the opening-and-closing presser foot stitch tongue 47 of the 1st change demand means 14 carries out predetermined-time opening, and it becomes easy for a game sphere to win a prize to this 1st change demand means 14.

[0042] If the 1st change demand means 14 detects a game sphere, based on the change demand, the 1st game lottery means 53 will cast lots in a generating random number value, it will judge whether the 1st game judging means 54 generates the 1st game state from the lottery random number value, and the instruction information transmitting means 59 will transmit predetermined instruction information to the display-control substrate 51 according to the judgment result.

[0043] That is, the instruction information transmitting means 59 transmits the instruction information containing the 1st non-game judging and change time to the display-control substrate 51, respectively, when the judgment result of the 1st game judging means 54 is the 1st non-game judging about the instruction information which contains the 1st game judging and change time when the judgment result of the 1st game judging means 54 is the 1st game judging.

[0044] The instruction information analysis means 62 receives the instruction information from the instruction information transmitting means 59, in the display-control substrate 51, when the judgment result of the 1st game judging means 54 is the 1st game judging, the 1st game judging and change time are analyzed from instruction information, and in the 1st non-game judging, the 1st non-game judging and change time are analyzed from instruction information, respectively.

[0045] And when the judgment result of the 1st game judging means 54 is the 1st game judging, the 1st pattern control means 63 rotate rotating drums 19-21 in the predetermined direction with drive motors 22-24 based on instruction information, and indicate the 1st pattern 43-45 corresponding to the pattern viewing area 31 by change by rotation of these rotating drums 19-21. And each rotating drums 19-21 are rotating drums 19 and 21, after carrying out predetermined-time rotation. The 1st pattern 43 and 45 It becomes an of-the-same-kind pattern on which winning-a-prize line 36, and is 20d of check-by-looking sections of a rotating drum 20. It stops in order of the left, the right, and inside so that it may correspond on the winning-a-prize line 36.

[0046] On the other hand, the 2nd pattern control means 64 fluctuate the 2nd pattern 46 of the liquid crystal display means 25 with other animation proper display gestalten with a predetermined change pattern from a rotating drum's 20 halt time based on instruction information out of rotation of rotating drums 19-21. and rotating drums 19 and 21 The 1st pattern 43 and 45 corresponding to the winning-a-prize line 36 a halt pattern -- for example, in being both "7", the 2nd pattern 46 of the liquid crystal display means 25 indicates "7" by halt after progress of a pr determined time, and it becomes the specific mode as which all the halt patterns

on the winning-a-prize line 36 display "7" of an of-the-same-kind pattern by this [0047] Thus, by combining the change display of the 1st pattern 43-45 by rotation of rotating drums 19-21, and the change display of the 2nd pattern 46 by the liquid crystal display means 25, as compared with the change display only by the conventional rotating drums 19-21, on the basis of mechanical composition, though, the uniform change display of a pattern can be prevented, and the production nature of a change display of a pattern can be raised. When stopping especially the 2nd pattern 46 of the liquid crystal display means 25 at the end, the stage effects of reach production can be raised with the 2nd pattern 46.

[0048] If the liquid crystal display means 25 is used, compared with the case where other display meanses are used, the liquid crystal display means 25 can be easily arranged inside a rotating drum 20, and, moreover, the fine production display of the 2nd pattern 46 is also possible [it is possible to replace with the liquid crystal display means 25, and to use electric display meanses, such as other image display meanses, and].

[0049] The 2nd operation gestalt of this invention is illustrated, and the liquid crystal display means 25 is formed in the interior of a rotating drum 21 with this operation gestalt, and drawing 8 and drawing 9 are 21d of check-by-looking sections to a rotating drum 21. It is prepared. Of course, the liquid crystal display means 25 may be formed in the interior of a rotating drum 19, and the liquid crystal display means 25 may be formed in the interior of all the rotating drums 19-21.

[0050] Thus, the liquid crystal display means 25 can raise the stage effects of the 1st change pattern display means 12 whole by the change display of the 2nd pattern 46 of the liquid crystal display means 25 by preparing in the interior of any one rotating drums 19-21 at least among two or more rotating drums 19-21.

[0051] As mentioned above, although each operation gestalt of this invention was explained in full detail, this invention is not limited to each operation gestalt. For example, one piece, two pieces, or ***** [the number of rotating drums 19-21 / four] or more although the 1st change pattern display means 12 equipped with three rotating drums 19-21 is illustrated with the operation gestalt. Moreover, when using two or more rotating drums 19-21, each of those rotating drums 19-21 establish the driving shafts 40-42 of drive motors 22-24, and other one shaft which it supports separately more and also is penetrated to two or more rotating drums 19-21, and you may make it support each rotating drums 19-21 with the shaft. You may use things other than a drive motor 22 - 24 for driving means. Moreover, two or more rotating drums 19-21 mind a clutch etc. by one driving means, and it drives separately and they may enable it to suspend it separately.

[0052] Although the rotating drums 19-21 of instantiation are the most suitable for an operation gestalt, things other than a rotating drum 19 - 21, for example, a predetermined configuration, and the rotation reel of structure may be used for a time fuselage, and other rotation belts are used for it, and ranging over two or more guide rollers etc., you may wind the rotation belt around it almost so that it may

correspond to the pattern viewing area 31.

[0053] Drum section 19c of the shape of a cylinder of rotating drums 19-21 - 21c, and rotating drums 20 and 21 by which the liquid crystal display means 25 has especially been arranged inside Drum sections 20c and 21c You may constitute the whole in the shape of transparence possible [a check by looking]. In this case, the check-by-looking sections 20d and 21d Even if the position of an except corresponds to the liquid crystal display means 25, they are rotating drums 20 and 21. The 1st near pattern 44 and 45 It is possible to direct a background by the display of the liquid crystal display means 25.

[0054] It is not necessary to necessarily arrange in the center of abbreviation of the vertical direction of the pattern viewing area 31, and that what is necessary is to make it correspond to the pattern viewing area 31, and just to arrange, like instantiation in an operation gestalt, a top or the bottom is made to bias and the liquid crystal display means 25 can also be arranged, when two or more patterns can be displayed on the pattern viewing area 31 in the vertical direction. Therefore, it is made to correspond to positions other than winning-a-prize line 36, and the liquid crystal display means 25 can also be arranged. However, in order to aim at improvement in the stage effects by the liquid crystal display means 25, it is desirable to arrange the liquid crystal display means 25 so that it may be located on the winning-a-prize line 36.

[0055] At each operation gestalt, they are two rotating drums 19 and 21. Or rotating drums 19 and 20 The 1st pattern 43 and 45 Or the 1st pattern 43 and 44 Although it is made to display one of the specific modes in the combination of a halt pattern with the 2nd pattern 46 of the liquid crystal display means 25 When the liquid crystal display means 25 has been arranged in positions other than winning-a-prize line 36, a specific mode will be displayed in the combination of the halt pattern of the 1st pattern 43-45 by the side of a rotating drum 19-21. Moreover, when two or more liquid crystal display meanses 25 have been arranged inside two or more rotating drums 19-21 so that it may correspond to the winning-a-prize line 36, it is also possible to display a specific mode only in the combination of the 2nd pattern 46 after a change halt.

[0056] If in charge of control of rotating drums 19-21 and the liquid crystal display means 25, they are the check-by-looking sections 20d and 21d. They are rotating drums 20 and 21 so that it may correspond to the liquid crystal display means 25. It is in the stopped state, the liquid crystal display means 25 performs the change display of the 2nd pattern 46, and they are rotating drums 20 and 21 after that. It is made to rotate and you may make it make it stop. In this case, rotating drums 20 and 21 When making it stop finally, it is not necessarily 20d of check-by-looking sections. It is not necessary to make it stop so that it may correspond to the liquid crystal display means 25.

[0057] Five winning-a-prize lines 36 which judge whether it is a specific mode are set up like an operation gestalt, and also lateral three are sufficient as them and 1 or

2 are sufficient as them. The winning-a-prize lines 36 are rotating drums 19 and 21 to the pattern viewing area 31 in the case of one in a longitudinal direction. Or rotating drums 19 and 20 The 1st pattern 43 and 45 Or the 1st pattern 43 and 44 What is necessary is just to make it the 2nd pattern 46 of the liquid crystal display means 25 located in a line with a horizontal single tier. If the liquid crystal display means 25 is used for the last decision in this case, they will be the check-by-looking sections 20d and 21d. They are rotating drums 20 and 21 so that it may correspond to the liquid crystal display means 25. It is made to stop.

[0058] The 1st pattern control means 63 are 20d of check-by-looking sections after change. The idle state corresponding to an anterior and covered section 20e of the liquid crystal display means 25 It constitutes selectable any with the idle state which covers the anterior of the liquid crystal display means 25 they are, and you may make it stop a rotating drum 20 by the any by formation of a game judging result and other predetermined conditions if needed.

[0059] 20d of in this case, check-by-looking sections If it corresponds to the liquid crystal display means 25, the 2nd pattern 46 can be used for the display of a specific mode and a non-specifying mode, and it is covered section 20e. If it corresponds to the liquid crystal display means 25, only the 1st pattern 43-45 of rotating drums 19-21 can be used for the display of a specific mode and a non-specifying mode. 20d of however, check-by-looking sections It is necessary to stop a rotating drum 20 so that it may not be located in the pattern viewing area 31.

[0060] Although it is possible to use various kinds of things, such as a dot formula display means and 7 segment formula display meanses, for a display means in addition to liquid crystal display means 25, it is desirable to adopt the display means which can control the 2nd pattern 46 electrically. Moreover, in an operation form, although illustrated about the 1st change pattern display means 12, it can carry out similarly with the 2nd change pattern display means 13. Of course, it can carry out also with a game machine without the 2nd change pattern display means 13.

[0061] Moreover, in various kinds of game machines, such as pinball machines, such as arrangement ball machines other than a pachinko machine, and a mahjong ball game machine, or a slot machine, it can carry out similarly. What is necessary is just to constitute so that each may stop according to a game person's deactivate request in case rotation of each rotating drums 19-21 is stopped and it stops change of the 2nd pattern 46 of a display means, in adopting it as a slot machine.

[0062] For one coma, it constitutes so that two or more 2nd patterns 46 may be indicated by halt, and you may make it two or more kinds of value arise with two or more of the 2nd patterns 46 for a display means. Moreover, it is made to rotate to the circumference of a horizontal axis, and also you may make it rotate each rotating drums 19-21 to the circumference of a vertical axis, or the circumference of a slanting shaft.

[0063]

[Effect of the Invention] The time fuselages 19-21 with which two or more kinds of

1st pattern 43-45 required for a game was expressed according to this invention, Since it has been arranged the driving means 22-24 which drive these time fuselages 19-21, and inside the time fuselages 19-21 and has the display means 25 which can change display the 2nd pattern 46 while [on the basis of mechanical composition] -- pattern 43- 45 and 46 a uniform change display -- it can prevent -- pattern 43- 45 and 46 The production nature of a change display can be raised.

[0064] Moreover, since it has the 2nd pattern control means 64 which fluctuate the 2nd pattern 46, and a predetermined pattern is alternatively chosen [control means] from two or more kinds of 2nd patterns 46, and indicate by halt, production nature can be raised by the change display of the 2nd pattern 46.

[0065] And since a part of 2nd pattern [at least] 46 is value equivalent to the 1st pattern 43-45, it can consider this 2nd pattern 46, and can generate a profits state, and its interest of a game person improves further.

[0066] Moreover, the time fuselage 20 is 20d of check-by-looking sections which can check the display means 25 side by looking. It has and is 20d of check-by-looking sections after rotation. Since it has the 1st pattern control means 63 which rotate the time fuselage 20 and fluctuate the 1st pattern 44 so that it may stop corresponding to the display means 25, where the time fuselage 20 is stopped, it can direct with the 2nd pattern 46 of the display means 25.

[0067] Furthermore, time fuselages 20 and 21 The check-by-looking sections 20d and 21d which can check the display means 25 side by looking The covered sections 20e and 21e which cannot be checked by looking It prepares for a hoop direction. They are 20d of check-by-looking sections, and 21d and the covered sections 20e and 21e after rotation. So that it may stop alternatively corresponding to the display means 25 Time fuselages 20 and 21 It is made to rotate and is the 1st pattern 44 and 45. Since it has the 1st pattern control means 63 to fluctuate Time fuselages 20 and 21 The 1st pattern 44 and 45 by ***** The change display with the 2nd pattern 46 of the display means 25 besides a change display, and the 1st pattern 44 and 45 which does not use the 2nd pattern 46 A change display can be chosen if needed.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the front view of the pinball machine in which the 1st operation gestalt of this invention is shown.

[Drawing 2] It is the front view of the 1st change pattern display means which shows the 1st operation gestalt of this invention.

[Drawing 3] It is the side cross section of the 1st change pattern display means which shows the 1st operation gestalt of this invention.

[Drawing 4] It is the transverse-plane cross section of the 1st change pattern display means which shows the 1st operation gestalt of this invention.

[Drawing 5] It is the flat-surface cross section of the 1st change pattern display means which shows the 1st operation gestalt of this invention.

[Drawing 6] It is the block diagram of a control system showing the 1st operation gestalt of this invention.

[Drawing 7] It is explanatory drawing of the 1st pattern and the 2nd pattern which show the 1st operation form of this invention.

[Drawing 8] It is the transverse-plane cross section of the 1st change pattern display means which shows the 2nd operation form of this invention.

[Drawing 9] It is the flat-surface cross section of the 1st change pattern display means which shows the 2nd operation form of this invention.

[Description of Notations]

19, 20, 21 Rotating drum (time fuselage)

20d, 21d Check-by-looking section

20e, 21e The covered section

22, 23, 24 Drive motor (driving means)

25 Liquid Crystal Display Means

43-45 The 1st pattern

46 2nd Pattern

55 1st Profits State Generating Means

63 1st Pattern Control Means

64 2nd Pattern Control Means

[Translation done.]

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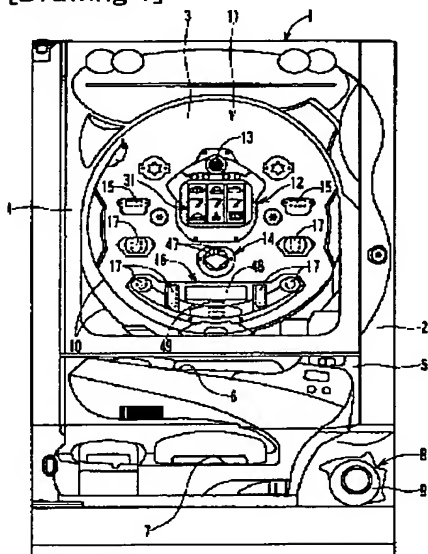
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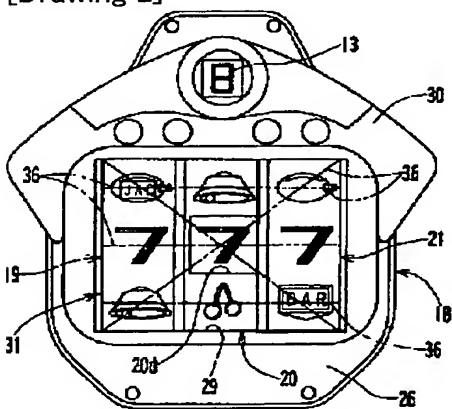
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DRAWINGS

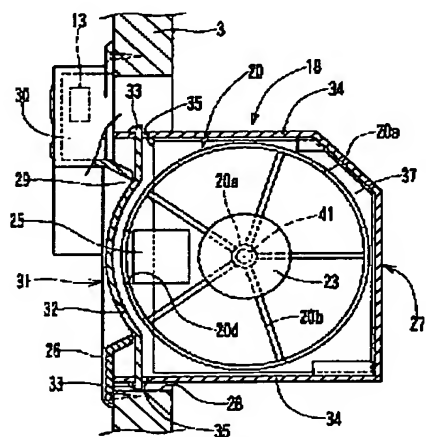
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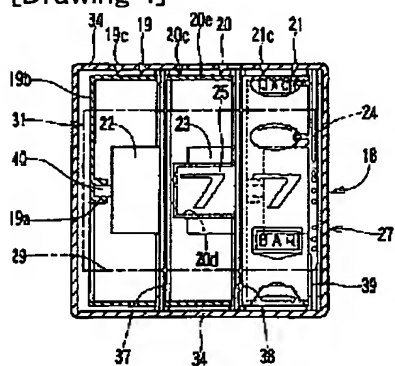
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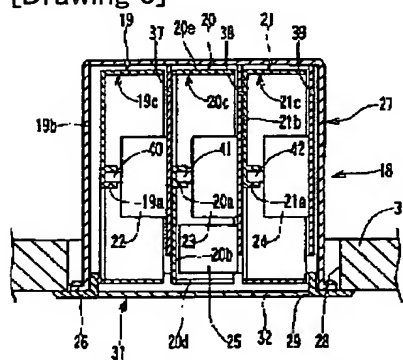
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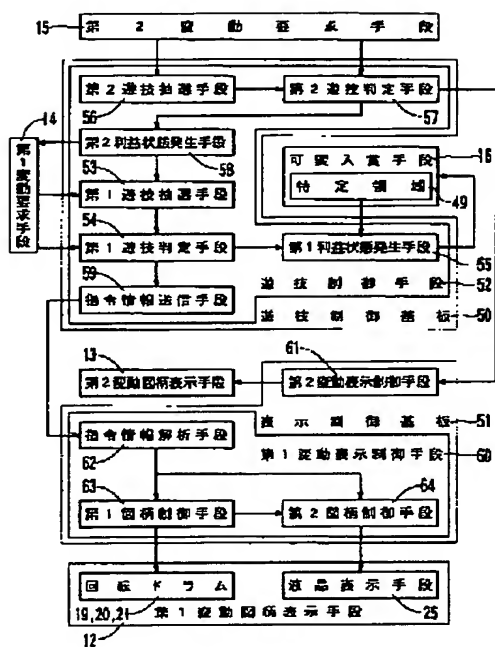
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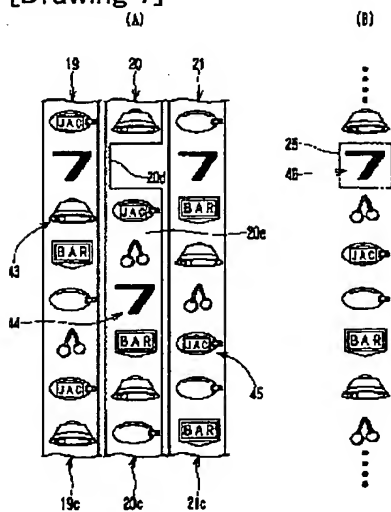
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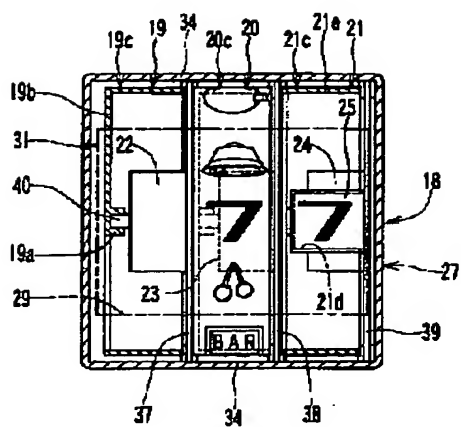
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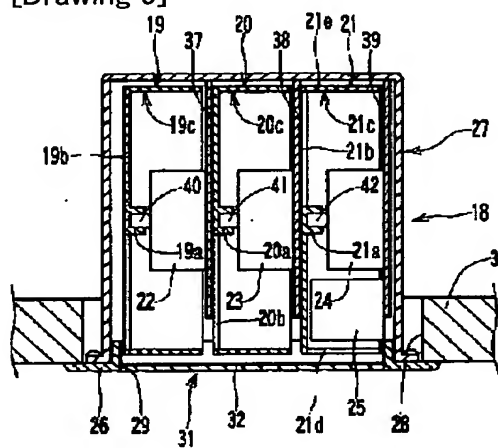
[Drawing 7]



[Drawing 8]



[Drawing 9]



[Translation done.]